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EXAMINER  
ROMEO, DAVID S

ART UNIT	PAPER NUMBER
1647	13

DATE MAILED: 11/19/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/323,854

Applicant(s)

TAM, CHERK SHING

Examiner

David S Romeo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 11 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-48 are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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**DETAILED ACTION**

1. The restriction requirement mailed 12/12/2000 (Paper No. 7) is withdrawn. A new restriction requirement is set forth below.

***Election/Restriction***

- 5      2. Restriction to one of the following inventions is required under 35 U.S.C. 121:
- I.      Claim(s) 1-23, to the extent that they are drawn to a polypeptide comprising the amino acid sequence of SEQ ID NO: 1, classified in class 530, subclass 324.
- II.     Claim(s) 1-23, to the extent that they are drawn to a polypeptide comprising the amino acid sequence of SEQ ID NO: 3, classified in class 530, subclass 324.
- 10    III.    Claim(s) 1-23, to the extent that they are drawn to a polypeptide comprising the amino acid sequence of SEQ ID NO: 4, classified in class 530, subclass 324.
- IV.    Claim(s) 1-23, to the extent that they are drawn to a polypeptide comprising the amino acid sequence of SEQ ID NO: 5, classified in class 530, subclass 324.
- V.     Claim(s) 1-23, to the extent that they are drawn to a polypeptide comprising the amino acid sequence of SEQ ID NO: 6, classified in class 530, subclass 326.
- 15    VI.    Claim(s) 1-23, to the extent that they are drawn to a polypeptide comprising the amino acid sequence of SEQ ID NO: 7, classified in class 530, subclass 326.
- VII.   Claim(s) 1-23, to the extent that they are drawn to a polypeptide comprising the amino acid sequence of SEQ ID NO: 9, classified in class 530, subclass 328.

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- VIII. Claim(s) 1-23, to the extent that they are drawn to a polypeptide comprising the amino acid sequence of SEQ ID NO: 25, classified in class 530, subclass 328.
- IX. Claim(s) 1-23, to the extent that they are drawn to a polypeptide comprising the amino acid sequence of SEQ ID NO: 26, classified in class 530, subclass 328.
- 5 X. Claim(s) 1-23, to the extent that they are drawn to a polypeptide comprising the amino acid sequence of SEQ ID NO: 27, classified in class 530, subclass 328.
- XI. Claim(s) 1-23, to the extent that they are drawn to a polypeptide comprising the amino acid sequence of SEQ ID NO: 28, classified in class 530, subclass 328.
- XII. Claim(s) 1-23, to the extent that they are drawn to a polypeptide comprising the amino acid sequence of SEQ ID NO: 29, classified in class 530, subclass 328.
- 10 XIII. Claim(s) 1-23, to the extent that they are drawn to a polypeptide comprising the amino acid sequence of SEQ ID NO: 30, classified in class 530, subclass 328.
- XIV. Claim(s) 1-23, to the extent that they are drawn to a polypeptide comprising the amino acid sequence of SEQ ID NO: 39, classified in class 530, subclass 328.
- 15 XV. Claim(s) 1-23, to the extent that they are drawn to a polypeptide comprising the amino acid sequence of SEQ ID NO: 40, classified in class 530, subclass 328.
- XVI. Claim(s) 1-23, to the extent that they are drawn to a polypeptide comprising the amino acid sequence of SEQ ID NO: 41, classified in class 530, subclass 328.
- XVII. Claim(s) 1-23, to the extent that they are drawn to a polypeptide comprising the amino acid sequence of SEQ ID NO: 42, classified in class 530, subclass 328.
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XVIII. Claim(s) 1-23, to the extent that they are drawn to a polypeptide comprising the amino acid sequence of SEQ ID NO: 43, classified in class 530, subclass 328.

XIX. Claim(s) 1-23, to the extent that they are drawn to a polypeptide comprising the amino acid sequence of SEQ ID NO: 44, classified in class 530, subclass 328.

5 XX. Claim(s) 1-23, to the extent that they are drawn to a polypeptide comprising the amino acid sequence of SEQ ID NO: 45, classified in class 530, subclass 328.

XXI. Claim(s) 1-23, to the extent that they are drawn to a polypeptide comprising the amino acid sequence of SEQ ID NO: 46, classified in class 530, subclass 328.

10 XXII. Claim(s) 1-23, to the extent that they are drawn to a polypeptide comprising the amino acid sequence of SEQ ID NO: 47, classified in class 530, subclass 328.

XXIII. Claim(s) 1-23, to the extent that they are drawn to a polypeptide comprising the amino acid sequence of SEQ ID NO: 48, classified in class 530, subclass 328.

15 XXIV. Claim(s) 1-23, to the extent that they are drawn to a polypeptide comprising the amino acid sequence of SEQ ID NO: 49, classified in class 530, subclass 328.

XXV. Claim(s) 1-23, to the extent that they are drawn to a polypeptide comprising the amino acid sequence of SEQ ID NO: 50, classified in class 530, subclass 328.

20 XXVI. Claim(s) 1-23, to the extent that they are drawn to a polypeptide comprising the amino acid sequence of SEQ ID NO: 51, classified in class 530, subclass 328.

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XXVII. Claim(s) 1-23, to the extent that they are drawn to a polypeptide comprising the amino acid sequence of SEQ ID NO: 52, classified in class 530, subclass 328.

5 XXVIII. Claim(s) 1-23, to the extent that they are drawn to a polypeptide comprising the amino acid sequence of SEQ ID NO: 53, classified in class 530, subclass 328.

XXIX. Claim(s) 1-23, to the extent that they are drawn to a polypeptide comprising the amino acid sequence of SEQ ID NO: 54, classified in class 530, subclass 328.

10 XXX. Claim(s) 24-29, to the extent that they are drawn to a method of treatment comprising administering a polypeptide comprising the amino acid sequence of SEQ ID NO: 1, classified in class 514, subclass 12.

15 XXXI. Claim(s) 24-29, to the extent that they are drawn to a method of treatment comprising administering a polypeptide comprising the amino acid sequence of SEQ ID NO: 3, classified in class 514, subclass 13.

XXXII. Claim(s) 24-29, to the extent that they are drawn to a method of treatment comprising administering a polypeptide comprising the amino acid sequence of SEQ ID NO: 4, classified in class 514, subclass 14.



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- XXXIII. Claim(s) 24-29, to the extent that they are drawn to a method of treatment comprising administering a polypeptide comprising the amino acid sequence of SEQ ID NO: 5, classified in class 514, subclass 15.
- XXXIV. Claim(s) 24-29, to the extent that they are drawn to a method of treatment comprising administering a polypeptide comprising the amino acid sequence of SEQ ID NO: 6, classified in class 514, subclass 15.
- XXXV. Claim(s) 24-29, to the extent that they are drawn to a method of treatment comprising administering a polypeptide comprising the amino acid sequence of SEQ ID NO: 7, classified in class 514, subclass 15.
- XXXVI. Claim(s) 24-29, to the extent that they are drawn to a method of treatment comprising administering a polypeptide comprising the amino acid sequence of SEQ ID NO: 9, classified in class 514, subclass 15.
- XXXVII. Claim(s) 24-29, to the extent that they are drawn to a method of treatment comprising administering a polypeptide comprising the amino acid sequence of SEQ ID NO: 25, classified in class 514, subclass 15.
- XXXVIII. Claim(s) 24-29, to the extent that they are drawn to a method of treatment comprising administering a polypeptide comprising the amino acid sequence of SEQ ID NO: 26, classified in class 514, subclass 15.

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XXXIX. Claim(s) 24-29, to the extent that they are drawn to a method of treatment comprising administering a polypeptide comprising the amino acid sequence of SEQ ID NO: 27, classified in class 514, subclass 15.

5 XL. Claim(s) 24-29, to the extent that they are drawn to a method of treatment comprising administering a polypeptide comprising the amino acid sequence of SEQ ID NO: 28, classified in class 514, subclass 15.

XLI. Claim(s) 24-29, to the extent that they are drawn to a method of treatment comprising administering a polypeptide comprising the amino acid sequence of SEQ ID NO: 29, classified in class 514, subclass 15.

10 XLII. Claim(s) 24-29, to the extent that they are drawn to a method of treatment comprising administering a polypeptide comprising the amino acid sequence of SEQ ID NO: 30, classified in class 514, subclass 15.

15 XLIII. Claim(s) 24-29, to the extent that they are drawn to a method of treatment comprising administering a polypeptide comprising the amino acid sequence of SEQ ID NO: 39, classified in class 514, subclass 15.

XLIV. Claim(s) 24-29, to the extent that they are drawn to a method of treatment comprising administering a polypeptide comprising the amino acid sequence of SEQ ID NO: 40, classified in class 514, subclass 15.



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XLV. Claim(s) 24-29, to the extent that they are drawn to a method of treatment comprising administering a polypeptide comprising the amino acid sequence of SEQ ID NO: 41, classified in class 514, subclass 15.

5 XLVI. Claim(s) 24-29, to the extent that they are drawn to a method of treatment comprising administering a polypeptide comprising the amino acid sequence of SEQ ID NO: 42, classified in class 514, subclass 15.

XLVII. Claim(s) 24-29, to the extent that they are drawn to a method of treatment comprising administering a polypeptide comprising the amino acid sequence of SEQ ID NO: 43, classified in class 514, subclass 15.

10 XLVIII. Claim(s) 24-29, to the extent that they are drawn to a method of treatment comprising administering a polypeptide comprising the amino acid sequence of SEQ ID NO: 44, classified in class 514, subclass 15.

15 XLIX. Claim(s) 24-29, to the extent that they are drawn to a method of treatment comprising administering a polypeptide comprising the amino acid sequence of SEQ ID NO: 45, classified in class 514, subclass 15.

L. Claim(s) 24-29, to the extent that they are drawn to a method of treatment comprising administering a polypeptide comprising the amino acid sequence of SEQ ID NO: 46, classified in class 514, subclass 15.

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- LI. Claim(s) 24-29, to the extent that they are drawn to a method of treatment comprising administering a polypeptide comprising the amino acid sequence of SEQ ID NO: 47, classified in class 514, subclass 15.
- 5 LII. Claim(s) 24-29, to the extent that they are drawn to a method of treatment comprising administering a polypeptide comprising the amino acid sequence of SEQ ID NO: 48, classified in class 514, subclass 15.
- LIII. Claim(s) 24-29, to the extent that they are drawn to a method of treatment comprising administering a polypeptide comprising the amino acid sequence of SEQ ID NO: 49, classified in class 514, subclass 15.
- 10 LIV. Claim(s) 24-29, to the extent that they are drawn to a method of treatment comprising administering a polypeptide comprising the amino acid sequence of SEQ ID NO: 50, classified in class 514, subclass 15.
- 15 LV. Claim(s) 24-29, to the extent that they are drawn to a method of treatment comprising administering a polypeptide comprising the amino acid sequence of SEQ ID NO: 51, classified in class 514, subclass 15.
- LVI. Claim(s) 24-29, to the extent that they are drawn to a method of treatment comprising administering a polypeptide comprising the amino acid sequence of SEQ ID NO: 52, classified in class 514, subclass 15.

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LVII. Claim(s) 24-29, to the extent that they are drawn to a method of treatment comprising administering a polypeptide comprising the amino acid sequence of SEQ ID NO: 53, classified in class 514, subclass 15.

LVIII. Claim(s) 24-29, to the extent that they are drawn to a method of treatment comprising administering a polypeptide comprising the amino acid sequence of SEQ ID NO: 54, classified in class 514, subclass 15.

LIX. Claim(s) 30, 31, to the extent that they are drawn to an antibody that binds a polypeptide comprising the amino acid sequence of SEQ ID NO: 1, classified in class 530, subclass 387.1.

LX. Claim(s) 30, 31, to the extent that they are drawn to an antibody that binds a polypeptide comprising the amino acid sequence of SEQ ID NO: 3, classified in class 530, subclass 387.1.

LXI. Claim(s) 30, 31, to the extent that they are drawn to an antibody that binds a polypeptide comprising the amino acid sequence of SEQ ID NO: 4, classified in class 530, subclass 387.1.

LXII. Claim(s) 30, 31, to the extent that they are drawn to an antibody that binds a polypeptide comprising the amino acid sequence of SEQ ID NO: 5, classified in class 530, subclass 387.1.

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LXIII. Claim(s) 30, 31, to the extent that they are drawn to an antibody that binds a polypeptide comprising the amino acid sequence of SEQ ID NO: 6, classified in class 530, subclass 387.1.

5 LXIV. Claim(s) 30, 31, to the extent that they are drawn to an antibody that binds a polypeptide comprising the amino acid sequence of SEQ ID NO: 7, classified in class 530, subclass 387.1.

LXV. Claim(s) 30, 31, to the extent that they are drawn to an antibody that binds a polypeptide comprising the amino acid sequence of SEQ ID NO: 9, classified in class 530, subclass 387.1.

10 LXVI. Claim(s) 30, 31, to the extent that they are drawn to an antibody that binds a polypeptide comprising the amino acid sequence of SEQ ID NO: 25, classified in class 530, subclass 387.1.

15 LXVII. Claim(s) 30, 31, to the extent that they are drawn to an antibody that binds a polypeptide comprising the amino acid sequence of SEQ ID NO: 26, classified in class 530, subclass 387.1.

LXVIII. Claim(s) 30, 31, to the extent that they are drawn to an antibody that binds a polypeptide comprising the amino acid sequence of SEQ ID NO: 27, classified in class 530, subclass 387.1.

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LXIX. Claim(s) 30, 31, to the extent that they are drawn to an antibody that binds a polypeptide comprising the amino acid sequence of SEQ ID NO: 28, classified in class 530, subclass 387.1.

5 LXX. Claim(s) 30, 31, to the extent that they are drawn to an antibody that binds a polypeptide comprising the amino acid sequence of SEQ ID NO: 29, classified in class 530, subclass 387.1.

LXXI. Claim(s) 30, 31, to the extent that they are drawn to an antibody that binds a polypeptide comprising the amino acid sequence of SEQ ID NO: 30, classified in class 530, subclass 387.1.

10 LXXII. Claim(s) 30, 31, to the extent that they are drawn to an antibody that binds a polypeptide comprising the amino acid sequence of SEQ ID NO: 39, classified in class 530, subclass 387.1.

15 LXXIII. Claim(s) 30, 31, to the extent that they are drawn to an antibody that binds a polypeptide comprising the amino acid sequence of SEQ ID NO: 40, classified in class 530, subclass 387.1.

LXXIV. Claim(s) 30, 31, to the extent that they are drawn to an antibody that binds a polypeptide comprising the amino acid sequence of SEQ ID NO: 41, classified in class 530, subclass 387.1.

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LXXV. Claim(s) 30, 31, to the extent that they are drawn to an antibody that binds a polypeptide comprising the amino acid sequence of SEQ ID NO: 42, classified in class 530, subclass 387.1.

5 LXXVI. Claim(s) 30, 31, to the extent that they are drawn to an antibody that binds a polypeptide comprising the amino acid sequence of SEQ ID NO: 43, classified in class 530, subclass 387.1.

LXXVII. Claim(s) 30, 31, to the extent that they are drawn to an antibody that binds a polypeptide comprising the amino acid sequence of SEQ ID NO: 44, classified in class 530, subclass 387.1.

10 LXXVIII. Claim(s) 30, 31, to the extent that they are drawn to an antibody that binds a polypeptide comprising the amino acid sequence of SEQ ID NO: 45, classified in class 530, subclass 387.1.

LXXIX. Claim(s) 30, 31, to the extent that they are drawn to an antibody that binds a polypeptide comprising the amino acid sequence of SEQ ID NO: 46, classified in class 530, subclass 387.1.

15 LXXX. Claim(s) 30, 31, to the extent that they are drawn to an antibody that binds a polypeptide comprising the amino acid sequence of SEQ ID NO: 47, classified in class 530, subclass 387.1.



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- LXXXI. Claim(s) 30, 31, to the extent that they are drawn to an antibody that binds a polypeptide comprising the amino acid sequence of SEQ ID NO: 48, classified in class 530, subclass 387.1.
- LXXXII. Claim(s) 30, 31, to the extent that they are drawn to an antibody that binds a polypeptide comprising the amino acid sequence of SEQ ID NO: 49, classified in class 530, subclass 387.1.
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- LXXXIII. Claim(s) 30, 31, to the extent that they are drawn to an antibody that binds a polypeptide comprising the amino acid sequence of SEQ ID NO: 50, classified in class 530, subclass 387.1.
- LXXXIV. Claim(s) 30, 31, to the extent that they are drawn to an antibody that binds a polypeptide comprising the amino acid sequence of SEQ ID NO: 51, classified in class 530, subclass 387.1.
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- LXXXV. Claim(s) 30, 31, to the extent that they are drawn to an antibody that binds a polypeptide comprising the amino acid sequence of SEQ ID NO: 52, classified in class 530, subclass 387.1.
- LXXXVI. Claim(s) 30, 31, to the extent that they are drawn to an antibody that binds a polypeptide comprising the amino acid sequence of SEQ ID NO: 53, classified in class 530, subclass 387.1.

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LXXXVII. Claim(s) 30, 31, to the extent that they are drawn to an antibody that binds a polypeptide comprising the amino acid sequence of SEQ ID NO: 54, classified in class 530, subclass 387.1.

5 LXXXVIII. Claim(s) 32-34, to the extent that they are drawn to a polynucleotide encoding a polypeptide comprising the amino acid sequence of SEQ ID NO: 1, classified in class 536, subclass 23.5.

LXXXIX. Claim(s) 32-34, to the extent that they are drawn to a polynucleotide encoding a polypeptide comprising the amino acid sequence of SEQ ID NO: 3, classified in class 536, subclass 23.5.

10 XC. Claim(s) 32-34, to the extent that they are drawn to a polynucleotide encoding a polypeptide comprising the amino acid sequence of SEQ ID NO: 4, classified in class 536, subclass 23.5.

XCI. Claim(s) 32-34, to the extent that they are drawn to a polynucleotide encoding a polypeptide comprising the amino acid sequence of SEQ ID NO: 5, classified in class 536, subclass 23.5.

15 XCII. Claim(s) 32-34, to the extent that they are drawn to a polynucleotide encoding a polypeptide comprising the amino acid sequence of SEQ ID NO: 6, classified in class 536, subclass 23.5.

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XCI. Claim(s) 32-34, to the extent that they are drawn to a polynucleotide encoding a polypeptide comprising the amino acid sequence of SEQ ID NO: 7, classified in class 536, subclass 23.5.

XCII. Claim(s) 32-34, to the extent that they are drawn to a polynucleotide encoding a polypeptide comprising the amino acid sequence of SEQ ID NO: 9, classified in class 536, subclass 23.5.

XCIII. Claim(s) 32-34, to the extent that they are drawn to a polynucleotide encoding a polypeptide comprising the amino acid sequence of SEQ ID NO: 25, classified in class 536, subclass 23.5.

XCIV. Claim(s) 32-34, to the extent that they are drawn to a polynucleotide encoding a polypeptide comprising the amino acid sequence of SEQ ID NO: 26, classified in class 536, subclass 23.5.

XCV. Claim(s) 32-34, to the extent that they are drawn to a polynucleotide encoding a polypeptide comprising the amino acid sequence of SEQ ID NO: 27, classified in class 536, subclass 23.5.

XCVI. Claim(s) 32-34, to the extent that they are drawn to a polynucleotide encoding a polypeptide comprising the amino acid sequence of SEQ ID NO: 28, classified in class 536, subclass 23.5.

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XCIX. Claim(s) 32-34, to the extent that they are drawn to a polynucleotide encoding a polypeptide comprising the amino acid sequence of SEQ ID NO: 29, classified in class 536, subclass 23.5.

5 C. Claim(s) 32-34, to the extent that they are drawn to a polynucleotide encoding a polypeptide comprising the amino acid sequence of SEQ ID NO: 30, classified in class 536, subclass 23.5.

CI. Claim(s) 32-34, to the extent that they are drawn to a polynucleotide encoding a polypeptide comprising the amino acid sequence of SEQ ID NO: 39, classified in class 536, subclass 23.5.

10 CII. Claim(s) 32-34, to the extent that they are drawn to a polynucleotide encoding a polypeptide comprising the amino acid sequence of SEQ ID NO: 40, classified in class 536, subclass 23.5.

15 CIII. Claim(s) 32-34, to the extent that they are drawn to a polynucleotide encoding a polypeptide comprising the amino acid sequence of SEQ ID NO: 41, classified in class 536, subclass 23.5.

CIV. Claim(s) 32-34, to the extent that they are drawn to a polynucleotide encoding a polypeptide comprising the amino acid sequence of SEQ ID NO: 42, classified in class 536, subclass 23.5.

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CV. Claim(s) 32-34, to the extent that they are drawn to a polynucleotide encoding a polypeptide comprising the amino acid sequence of SEQ ID NO: 43, classified in class 536, subclass 23.5.

5 CVI. Claim(s) 32-34, to the extent that they are drawn to a polynucleotide encoding a polypeptide comprising the amino acid sequence of SEQ ID NO: 44, classified in class 536, subclass 23.5.

CVII. Claim(s) 32-34, to the extent that they are drawn to a polynucleotide encoding a polypeptide comprising the amino acid sequence of SEQ ID NO: 45, classified in class 536, subclass 23.5.

10 CVIII. Claim(s) 32-34, to the extent that they are drawn to a polynucleotide encoding a polypeptide comprising the amino acid sequence of SEQ ID NO: 46, classified in class 536, subclass 23.5.

15 CIX. Claim(s) 32-34, to the extent that they are drawn to a polynucleotide encoding a polypeptide comprising the amino acid sequence of SEQ ID NO: 47, classified in class 536, subclass 23.5.

CX. Claim(s) 32-34, to the extent that they are drawn to a polynucleotide encoding a polypeptide comprising the amino acid sequence of SEQ ID NO: 48, classified in class 536, subclass 23.5.

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CXI. Claim(s) 32-34, to the extent that they are drawn to a polynucleotide encoding a polypeptide comprising the amino acid sequence of SEQ ID NO: 49, classified in class 536, subclass 23.5.

5 CXII. Claim(s) 32-34, to the extent that they are drawn to a polynucleotide encoding a polypeptide comprising the amino acid sequence of SEQ ID NO: 50, classified in class 536, subclass 23.5.

CXIII. Claim(s) 32-34, to the extent that they are drawn to a polynucleotide encoding a polypeptide comprising the amino acid sequence of SEQ ID NO: 51, classified in class 536, subclass 23.5.

10 CXIV. Claim(s) 32-34, to the extent that they are drawn to a polynucleotide encoding a polypeptide comprising the amino acid sequence of SEQ ID NO: 52, classified in class 536, subclass 23.5.

15 CXV. Claim(s) 32-34, to the extent that they are drawn to a polynucleotide encoding a polypeptide comprising the amino acid sequence of SEQ ID NO: 53, classified in class 536, subclass 23.5.

CXVI. Claim(s) 32-34, to the extent that they are drawn to a polynucleotide encoding a polypeptide comprising the amino acid sequence of SEQ ID NO: 54, classified in class 536, subclass 23.5.

20 CXVII. Claim(s) 35-37, 38, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein



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residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 0 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residues numbered  $n + 8$  is cysteine, serine, tyrosine, or alanine, classified in class 530, subclass 328.

CXIX. Claim(s) 35-37, 39, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 0 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n$  is arginine, classified in class 530, subclass 328.

CXX. Claim(s) 35-37, 40, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 0 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 1$  is alanine or threonine, classified in class 530, subclass 328.

CXXI. Claim(s) 35-37, 41, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$

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is 0 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 2$  is alanine, asparagine, or glutamine, classified in class 530, subclass 328.

5 CXXII. Claim(s) 35-37, 42, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 0 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 3$  is glutamic acid, classified in class 530, subclass 328.

10 CXXIII. Claim(s) 35-37, 43, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 0 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 4$  is histidine, classified in class 530, subclass 328.

15 CXXIV. Claim(s) 35-37, 44, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 0 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue

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numbered  $n + 5$  is threonine or alanine, classified in class 530, subclass 328.

5 CXXV. Claim(s) 35-37, 45, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 0 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 6$  is glycine or alanine, classified in class 530, subclass 328.

10 CXXVI. Claim(s) 35-37, 46, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 0 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 7$  is glutamic acid or aspartic acid, classified in class 530, subclass 328.

15 CXXVII. Claim(s) 35-37, 47, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 0 wherein each of the remaining amino acid

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residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 9$  is lysine, classified in class 530, subclass 328.

5 CXXVIII. Claim(s) 35-37, 48, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 0 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 8$  is serine, classified in class 530, subclass 328.

10 CXXIX. Claim(s) 35-37, 38, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 1 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residues numbered  $n + 8$  is cysteine, serine, tyrosine, or alanine, classified in class 15 530, subclass 327.

CXXX. Claim(s) 35-37, 39, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 1 wherein each of the remaining amino acid

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residues is selected from the group recited in claim 37 wherein the residue numbered  $n$  is arginine, classified in class 530, subclass 327.

5 CXXXI. Claim(s) 35-37, 40, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 1 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 1$  is alanine or threonine, classified in class 530, subclass 327.

10 CXXXII. Claim(s) 35-37, 41, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 1 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 2$  is alanine, asparagine, or glutamine, classified in class 530, subclass 327.

15 CXXXIII. Claim(s) 35-37, 42, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 1 wherein each of the remaining amino acid

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residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 3$  is glutamic acid, classified in class 530, subclass 327.

5 CXXXIV. Claim(s) 35-37, 43, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 1 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 4$  is histidine, classified in class 530, subclass 327.

10 CXXXV. Claim(s) 35-37, 44, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 1 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 5$  is threonine or alanine, classified in class 530, subclass 327.

15 CXXXVI. Claim(s) 35-37, 45, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 1 wherein each of the remaining amino acid



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residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 6$  is glycine or alanine, classified in class 530, subclass 327.

5 CXXXVII. Claim(s) 35-37, 46, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 1 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 7$  is glutamic acid or aspartic acid, classified in class 530, subclass 327.

10 CXXXVIII. Claim(s) 35-37, 47, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 1 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 9$  is lysine, classified in class 530, subclass 327.

15 CXXXIX. Claim(s) 35-37, 48, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 1 wherein each of the remaining amino acid

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residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 8$  is serine, classified in class 530, subclass 327.

5 CXL. Claim(s) 35-37, 38, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 2 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residues numbered  $n + 8$  is cysteine, serine, tyrosine, or alanine, classified in class 530, subclass 327.

10 CXLI. Claim(s) 35-37, 39, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 2 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n$  is arginine, classified in class 530, subclass 327.

15 CXLII. Claim(s) 35-37, 40, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 2 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue

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numbered  $n + 1$  is alanine or threonine, classified in class 530, subclass 327.

5 CXLIII. Claim(s) 35-37, 41, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 2 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 2$  is alanine, asparagine, or glutamine, classified in class 530, subclass 327.

10 CXLIV. Claim(s) 35-37, 42, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 2 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 3$  is glutamic acid, classified in class 530, subclass 327.

15 CXLV. Claim(s) 35-37, 43, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 2 wherein each of the remaining amino acid

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residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 4$  is histidine, classified in class 530, subclass 327.

5 CXLVI. Claim(s) 35-37, 44, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 2 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 5$  is threonine or alanine, classified in class 530, subclass 327.

10 CXLVII. Claim(s) 35-37, 45, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 2 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 6$  is glycine or alanine, classified in class 530, subclass 327.

15 CXLVIII. Claim(s) 35-37, 46, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 2 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue

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numbered  $n + 7$  is glutamic acid or aspartic acid, classified in class 530, subclass 327.

5 CXLIX. Claim(s) 35-37, 47, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 2 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 9$  is lysine, classified in class 530, subclass 327.

10 CL. Claim(s) 35-37, 48, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 2 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 8$  is serine, classified in class 530, subclass 327.

15 CLI. Claim(s) 35-37, 38, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 3 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residues numbered  $n + 8$  is cysteine, serine, tyrosine, or alanine, classified in class 530, subclass 327.

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5 CLII. Claim(s) 35-37, 39, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 3 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n$  is arginine, classified in class 530, subclass 327.

10 CLIII. Claim(s) 35-37, 40, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 3 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 1$  is alanine or threonine, classified in class 530, subclass 327.

15 CLIV. Claim(s) 35-37, 41, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 3 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 2$  is alanine, asparagine, or glutamine, classified in class 530, subclass 327.

20 CLV. Claim(s) 35-37, 42, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n +$



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9 are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 3 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 3$  is glutamic acid, classified in class 530, subclass 327.

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CLVI. Claim(s) 35-37, 43, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 3 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 4$  is histidine, classified in class 530, subclass 327.

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CLVII. Claim(s) 35-37, 44, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 3 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 5$  is threonine or alanine, classified in class 530, subclass 327.

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CLVIII. Claim(s) 35-37, 45, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an

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integer from 1 to  $1 + q$  and  $q$  is 3 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 6$  is glycine or alanine, classified in class 530, subclass 327.

5 CLIX. Claim(s) 35-37, 46, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 3 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 7$  is glutamic acid or aspartic acid, classified in class 530, subclass 327.

10 CLX. Claim(s) 35-37, 47, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 3 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 9$  is lysine, classified in class 530, subclass 327.

15 CLXI. Claim(s) 35-37, 48, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 3 wherein each of the remaining amino acid residues is selected from the group

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recited in claim 37 wherein the residue numbered  $n + 8$  is serine, classified in class 530, subclass 327.

5 CLXII. Claim(s) 35-37, 38, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 4 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residues numbered  $n + 8$  is cysteine, serine, tyrosine, or alanine, classified in class 530, subclass 327.

10 CLXIII. Claim(s) 35-37, 39, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 4 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n$  is arginine, classified in class 530, subclass 327.

15 CLXIV. Claim(s) 35-37, 40, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 4 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue

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numbered  $n + 1$  is alanine or threonine, classified in class 530, subclass 327.

5 CLXV. Claim(s) 35-37, 41, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 4 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 2$  is alanine, asparagine, or glutamine, classified in class 530, subclass 327.

10 CLXVI. Claim(s) 35-37, 42, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 4 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 3$  is glutamic acid, classified in class 530, subclass 327.

15 CLXVII. Claim(s) 35-37, 43, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 4 wherein each of the remaining amino acid

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residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 4$  is histidine, classified in class 530, subclass 327.

5 CLXVIII. Claim(s) 35-37, 44, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 4 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 5$  is threonine or alanine, classified in class 530, subclass 327.

10 CLXIX. Claim(s) 35-37, 45, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 4 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 6$  is glycine or alanine, classified in class 530, subclass 327.

15 CLXX. Claim(s) 35-37, 46, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 4 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue

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numbered  $n + 7$  is glutamic acid or aspartic acid, classified in class 530, subclass 327.

5 CLXXI. Claim(s) 35-37, 47, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 4 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 9$  is lysine, classified in class 530, subclass 327.

10 CLXXII. Claim(s) 35-37, 48, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 4 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 8$  is serine, classified in class 530, subclass 327.

15 CLXXIII. Claim(s) 35-37, 38, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 5 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residues

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numbered  $n + 8$  is cysteine, serine, tyrosine, or alanine, classified in class 530, subclass 326.

5 CLXXIV. Claim(s) 35-37, 39, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 5 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n$  is arginine, classified in class 530, subclass 326.

10 CLXXV. Claim(s) 35-37, 40, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 5 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 1$  is alanine or threonine, classified in class 530, subclass 326.

15 CLXXVI. Claim(s) 35-37, 41, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 5 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue

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numbered  $n + 2$  is alanine, asparagine, or glutamine, classified in class 530, subclass 326.

5 CLXXVII. Claim(s) 35-37, 42, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 5 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 3$  is glutamic acid, classified in class 530, subclass 326.

10 CLXXVIII. Claim(s) 35-37, 43, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 5 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 4$  is histidine, classified in class 530, subclass 326.

15 CLXXIX. Claim(s) 35-37, 44, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 5 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue

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numbered  $n + 5$  is threonine or alanine, classified in class 530, subclass 326.

5 CLXXX. Claim(s) 35-37, 45, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 5 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 6$  is glycine or alanine, classified in class 530, subclass 326.

10 CLXXXI. Claim(s) 35-37, 46, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 5 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 7$  is glutamic acid or aspartic acid, classified in class 530, subclass 326.

15 CLXXXII. Claim(s) 35-37, 47, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 5 wherein each of the remaining amino acid

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residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 9$  is lysine, classified in class 530, subclass 326.

5 CLXXXIII. Claim(s) 35-37, 48, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 5 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 8$  is serine, classified in class 530, subclass 326.

10 CLXXXIV. Claim(s) 35-37, 38, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 6 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residues numbered  $n + 8$  is cysteine, serine, tyrosine, or alanine, classified in class 530, subclass 326.

15 CLXXXV. Claim(s) 35-37, 39, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 6 wherein each of the remaining amino acid

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residues is selected from the group recited in claim 37 wherein the residue numbered  $n$  is arginine, classified in class 530, subclass 326.

5 CLXXXVI. Claim(s) 35-37, 40, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 6 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 1$  is alanine or threonine, classified in class 530, subclass 326.

10 CLXXXVII. Claim(s) 35-37, 41, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 6 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 2$  is alanine, asparagine, or glutamine, classified in class 530, subclass 326.

15 CLXXXVIII. Claim(s) 35-37, 42, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 6 wherein each of the remaining amino acid

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residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 3$  is glutamic acid, classified in class 530, subclass 326.

5 CLXXXIX. Claim(s) 35-37, 43, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 6 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 4$  is histidine, classified in class 530, subclass 326.

10 CXC. Claim(s) 35-37, 44, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 6 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 5$  is threonine or alanine, classified in class 530, subclass 326.

15 CXCI. Claim(s) 35-37, 45, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 6 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 6$  is glycine or alanine, classified in class 530, subclass 326.

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CXCII.

Claim(s) 35-37, 46, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 6 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 7$  is glutamic acid or aspartic acid, classified in class 530, subclass 326.

CXCIII.

Claim(s) 35-37, 47, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 6 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 9$  is lysine, classified in class 530, subclass 326.

CXCIV.

Claim(s) 35-37, 48, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 6 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 8$  is serine, classified in class 530, subclass 326.

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CXCV.

Claim(s) 35-37, 38, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 7 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residues numbered  $n + 8$  is cysteine, serine, tyrosine, or alanine, classified in class 530, subclass 326.

CXCVI.

Claim(s) 35-37, 39, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 7 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n$  is arginine, classified in class 530, subclass 326.

CXCVII.

Claim(s) 35-37, 40, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 7 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 1$  is alanine or threonine, classified in class 530, subclass 326.



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5 CXC VIII. Claim(s) 35-37, 41, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 7 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 2$  is alanine, asparagine, or glutamine, classified in class 530, subclass 326.

10 CXC IX. Claim(s) 35-37, 42, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 7 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 3$  is glutamic acid, classified in class 530, subclass 326.

15 CC. Claim(s) 35-37, 43, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 7 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 4$  is histidine, classified in class 530, subclass 326.

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CCI. Claim(s) 35-37, 44, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 7 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 5$  is threonine or alanine, classified in class 530, subclass 326.

CCII. Claim(s) 35-37, 45, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 7 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 6$  is glycine or alanine, classified in class 530, subclass 326.

CCIII. Claim(s) 35-37, 46, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 7 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 7$  is glutamic acid or aspartic acid, classified in class 530, subclass 326.

CCIV. Claim(s) 35-37, 47, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n +$

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9 are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 7 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 9$  is lysine, classified in class 530, subclass 326.

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CCV. Claim(s) 35-37, 48, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 7 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 8$  is serine, classified in class 530, subclass 326.

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CCVI. Claim(s) 35-37, 38, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 8 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residues numbered  $n + 8$  is cysteine, serine, tyrosine, or alanine, classified in class 530, subclass 326.

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CCVII. Claim(s) 35-37, 39, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 8 wherein each of the remaining amino acid

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residues is selected from the group recited in claim 37 wherein the residue numbered  $n$  is arginine, classified in class 530, subclass 326.

5 CCVIII. Claim(s) 35-37, 40, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 8 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 1$  is alanine or threonine, classified in class 530, subclass 326.

10 CCIX. Claim(s) 35-37, 41, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 8 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 2$  is alanine, asparagine, or glutamine, classified in class 530, subclass 326.

15 CCX. Claim(s) 35-37, 42, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 8 wherein each of the remaining amino acid residues is selected from the group

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recited in claim 37 wherein the residue numbered  $n + 3$  is glutamic acid, classified in class 530, subclass 326.

5 CCXI. Claim(s) 35-37, 43, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 8 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 4$  is histidine, classified in class 530, subclass 326.

10 CCXII. Claim(s) 35-37, 44, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 8 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 5$  is threonine or alanine, classified in class 530, subclass 326.

15 CCXIII. Claim(s) 35-37, 45, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 8 wherein each of the remaining amino acid

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residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 6$  is glycine or alanine, classified in class 530, subclass 326.

5 CCXIV. Claim(s) 35-37, 46, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 8 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 7$  is glutamic acid or aspartic acid, classified in class 530, subclass 326.

10 CCXV. Claim(s) 35-37, 47, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 8 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 9$  is lysine, classified in class 530, subclass 326.

15 CCXVI. Claim(s) 35-37, 48, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 8 wherein each of the remaining amino acid



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residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 8$  is serine, classified in class 530, subclass 326.

5 CCXVII. Claim(s) 35-37, 38, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 9 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residues numbered  $n + 8$  is cysteine, serine, tyrosine, or alanine, classified in class 530, subclass 326.

10 CCXVIII. Claim(s) 35-37, 39, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 9 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n$  is arginine, classified in class 530, subclass 326.

15 CCXIX. Claim(s) 35-37, 40, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 9 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue

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numbered  $n + 1$  is alanine or threonine, classified in class 530, subclass 326.

5 CCXX. Claim(s) 35-37, 41, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 9 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 2$  is alanine, asparagine, or glutamine, classified in class 530, subclass 326.

10 CCXXI. Claim(s) 35-37, 42, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 9 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 3$  is glutamic acid, classified in class 530, subclass 326.

15 CCXXII. Claim(s) 35-37, 43, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 9 wherein each of the remaining amino acid

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residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 4$  is histidine, classified in class 530, subclass 326.

5 CCXXIII. Claim(s) 35-37, 44, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 9 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 5$  is threonine or alanine, classified in class 530, subclass 326.

10 CCXXIV. Claim(s) 35-37, 45, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 9 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 6$  is glycine or alanine, classified in class 530, subclass 326.

15 CCXXV. Claim(s) 35-37, 46, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 9 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue

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numbered  $n + 7$  is glutamic acid or aspartic acid, classified in class 530, subclass 326.

5 CCXXVI. Claim(s) 35-37, 47, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 9 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 9$  is lysine, classified in class 530, subclass 326.

10 CCXXVII. Claim(s) 35-37, 48, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 9 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 8$  is serine, classified in class 530, subclass 326.

15 CCXXVIII. Claim(s) 35-37, 38, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 10 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the

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residues numbered  $n + 8$  is cysteine, serine, tyrosine, or alanine, classified in class 530, subclass 326.

5 CCXXIX. Claim(s) 35-37, 39, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 10 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n$  is arginine, classified in class 530, subclass 326.

10 CCXXX. Claim(s) 35-37, 40, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 10 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 1$  is alanine or threonine, classified in class 530, subclass 326.

15 CCXXXI. Claim(s) 35-37, 41, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 10 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the

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residue numbered  $n + 2$  is alanine, asparagine, or glutamine, classified in class 530, subclass 326.

5 CCXXXII. Claim(s) 35-37, 42, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 10 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 3$  is glutamic acid, classified in class 530, subclass 326.

10 CCXXXIII. Claim(s) 35-37, 43, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 10 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 4$  is histidine, classified in class 530, subclass 326.

15 CCXXXIV. Claim(s) 35-37, 44, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 10 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the

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residue numbered  $n + 5$  is threonine or alanine, classified in class 530, subclass 326.

5 CCXXXV. Claim(s) 35-37, 45, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 10 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 6$  is glycine or alanine, classified in class 530, subclass 326.

10 CCXXXVI. Claim(s) 35-37, 46, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 10 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 7$  is glutamic acid or aspartic acid, classified in class 15 530, subclass 326.

20 CCXXXVII. Claim(s) 35-37, 47, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 10 wherein each of the remaining amino

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acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 9$  is lysine, classified in class 530, subclass 326.

5 CCXXXVIII. Claim(s) 35-37, 48, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 10 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 8$  is serine, classified in class 530, subclass 326.

10 CCXXXIX. Claim(s) 35-37, 38, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 11 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residues numbered  $n + 8$  is cysteine, serine, tyrosine, or alanine, classified in class 530, subclass 326.

15 CCXL. Claim(s) 35-37, 39, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 11 wherein each of the remaining amino



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acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n$  is arginine, classified in class 530, subclass 326.

5 CCXLI. Claim(s) 35-37, 40, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 11 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 1$  is alanine or threonine, classified in class 530, subclass 326.

10 CCXLII. Claim(s) 35-37, 41, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 11 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 2$  is alanine, asparagine, or glutamine, classified in class 530, subclass 326.

15 CCXLIII. Claim(s) 35-37, 42, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 11 wherein each of the remaining amino

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acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 3$  is glutamic acid, classified in class 530, subclass 326.

5 CCXLIV. Claim(s) 35-37, 43, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 11 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 4$  is histidine, classified in class 530, subclass 326.

10 CCXLV. Claim(s) 35-37, 44, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 11 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 5$  is threonine or alanine, classified in class 530, subclass 326.

15 CCXLVI. Claim(s) 35-37, 45, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 11 wherein each of the remaining amino

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acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 6$  is glycine or alanine, classified in class 530, subclass 326.

5 CCXLVII. Claim(s) 35-37, 46, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 11 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 7$  is glutamic acid or aspartic acid, classified in class 10 530, subclass 326.

CCXLVIII. Claim(s) 35-37, 47, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 11 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 9$  is lysine, classified in class 530, subclass 326. 15

CCXLIX. Claim(s) 35-37, 48, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 11 wherein each of the remaining amino 20

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acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 8$  is serine, classified in class 530, subclass 326.

5 CCL. Claim(s) 35-37, 38, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 12 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residues numbered  $n + 8$  is cysteine, serine, tyrosine, or alanine, classified in class 530, subclass 326.

10 CCLI. Claim(s) 35-37, 39, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 12 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n$  is arginine, classified in class 530, subclass 326.

15 CCLII. Claim(s) 35-37, 40, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 12 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the

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residue numbered  $n + 1$  is alanine or threonine, classified in class 530, subclass 326.

5 CCLIII. Claim(s) 35-37, 41, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 12 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 2$  is alanine, asparagine, or glutamine, classified in class 530, subclass 326.

10 CCLIV. Claim(s) 35-37, 42, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 12 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 3$  is glutamic acid, classified in class 530, subclass 326.

15 CCLV. Claim(s) 35-37, 43, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 12 wherein each of the remaining amino

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acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 4$  is histidine, classified in class 530, subclass 326.

5 CCLVI. Claim(s) 35-37, 44, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 12 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 5$  is threonine or alanine, classified in class 530, subclass 326.

10 CCLVII. Claim(s) 35-37, 45, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 12 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 6$  is glycine or alanine, classified in class 530, subclass 326.

15 CCLVIII. Claim(s) 35-37, 46, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 12 wherein each of the remaining amino

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acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 7$  is glutamic acid or aspartic acid, classified in class 530, subclass 326.

CCLIX.

Claim(s) 35-37, 47, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 12 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 9$  is lysine, classified in class 530, subclass 326.

CCLX.

Claim(s) 35-37, 48, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 12 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 8$  is serine, classified in class 530, subclass 326.

CCLXI.

Claim(s) 35-37, 38, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 13 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the



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residues numbered  $n + 8$  is cysteine, serine, tyrosine, or alanine, classified in class 530, subclass 326.

5 CCLXII. Claim(s) 35-37, 39, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 13 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n$  is arginine, classified in class 530, subclass 326.

10 CCLXIII. Claim(s) 35-37, 40, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 13 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 1$  is alanine or threonine, classified in class 530, subclass 326.

15 CCLXIV. Claim(s) 35-37, 41, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 13 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the

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residue numbered  $n + 2$  is alanine, asparagine, or glutamine, classified in class 530, subclass 326.

5 CCLXV. Claim(s) 35-37, 42, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 13 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 3$  is glutamic acid, classified in class 530, subclass 326.

10 CCLXVI. Claim(s) 35-37, 43, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 13 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 4$  is histidine, classified in class 530, subclass 326.

15 CCLXVII. Claim(s) 35-37, 44, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 13 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the

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residue numbered  $n + 5$  is threonine or alanine, classified in class 530, subclass 326.

5 CCLXVIII. Claim(s) 35-37, 45, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 13 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 6$  is glycine or alanine, classified in class 530, subclass 326.

10 CCLXIX. Claim(s) 35-37, 46, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 13 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 7$  is glutamic acid or aspartic acid, classified in class 15 530, subclass 326.

20 CCLXX. Claim(s) 35-37, 47, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 13 wherein each of the remaining amino

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acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 9$  is lysine, classified in class 530, subclass 326.

5 CCLXXI. Claim(s) 35-37, 48, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 13 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 8$  is serine, classified in class 530, subclass 326.

10 CCLXXII. Claim(s) 35-37, 38, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 14 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residues numbered  $n + 8$  is cysteine, serine, tyrosine, or alanine, classified in class 530, subclass 325.

15 CCLXXIII. Claim(s) 35-37, 39, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 14 wherein each of the remaining amino

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acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n$  is arginine, classified in class 530, subclass 325.

5 CCLXXIV. Claim(s) 35-37, 40, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 14 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 1$  is alanine or threonine, classified in class 530, subclass 325.

10 CCLXXV. Claim(s) 35-37, 41, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 14 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 2$  is alanine, asparagine, or glutamine, classified in class 530, subclass 325.

15 CCLXXVI. Claim(s) 35-37, 42, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 14 wherein each of the remaining amino

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acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 3$  is glutamic acid, classified in class 530, subclass 325.

5 CCLXXVII. Claim(s) 35-37, 43, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 14 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 4$  is histidine, classified in class 530, subclass 325.

10 CCLXXVIII. Claim(s) 35-37, 44, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 14 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 5$  is threonine or alanine, classified in class 530, subclass 325.

15 CCLXXIX. Claim(s) 35-37, 45, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 14 wherein each of the remaining amino

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acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 6$  is glycine or alanine, classified in class 530, subclass 325.

5 CCLXXX. Claim(s) 35-37, 46, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 14 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 7$  is glutamic acid or aspartic acid, classified in class 10 530, subclass 325.

CCLXXXI. Claim(s) 35-37, 47, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 14 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 9$  is lysine, classified in class 530, subclass 325. 15

CCLXXXII. Claim(s) 35-37, 48, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n, n + 4, n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 14 wherein each of the remaining amino 20



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acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 8$  is serine, classified in class 530, subclass 325.

5 CCLXXXIII. Claim(s) 35-37, 38, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 15 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residues numbered  $n + 8$  is cysteine, serine, tyrosine, or alanine, classified in class 530, subclass 324.

10 CCLXXXIV. Claim(s) 35-37, 39, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 15 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n$  is arginine, classified in class 530, subclass 324.

15 CCLXXXV. Claim(s) 35-37, 40, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 15 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the

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residue numbered  $n + 1$  is alanine or threonine, classified in class 530, subclass 324.

5 CCLXXXVI. Claim(s) 35-37, 41, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 15 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 2$  is alanine, asparagine, or glutamine, classified in class 530, subclass 324.

10 CCLXXXVII. Claim(s) 35-37, 42, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 15 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 3$  is glutamic acid, classified in class 530, subclass 324.

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CCLXXXVIII. Claim(s) 35-37, 43, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 15

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wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 4$  is histidine, classified in class 530, subclass 324.

5 CCLXXXIX. Claim(s) 35-37, 44, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 15 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 5$  is threonine or alanine, classified in class 530, subclass 324.

10 CCXC. Claim(s) 35-37, 45, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 15 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 6$  is glycine or alanine, classified in class 530, subclass 324.

15 CCXCI. Claim(s) 35-37, 46, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an

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integer from 1 to  $1 + q$  and  $q$  is 15 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 7$  is glutamic acid or aspartic acid, classified in class 530, subclass 324.

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CCXCII.

Claim(s) 35-37, 47, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 15 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 9$  is lysine, classified in class 530, subclass 324.

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CCXCIII.

Claim(s) 35-37, 48, to the extent that they are drawn to a polypeptide comprising an amino acid sequence that has  $10 + q$  amino acids, wherein residues  $n$ ,  $n + 4$ ,  $n + 9$  are positively charged amino acids, wherein  $n$  is an integer from 1 to  $1 + q$  and  $q$  is 15 wherein each of the remaining amino acid residues is selected from the group recited in claim 37 wherein the residue numbered  $n + 8$  is serine, classified in class 530, subclass 324.

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3. The inventions are distinct, each from the other because of the following reasons:

a. Each of inventions I-XXIX, CXVII-CCXCIII and each of inventions XXX-LVIII are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be

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practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case each of I-XXIX, CXVII-CCXCIII could be used in vitro for the identification of antagonists or agonists thereto or as an antigen for the production of antibodies thereto. XXX-LVIII could be practice with a BMP.

5           b.       The polypeptide of invention I-XXIX, CXVII-CCXCIII is related to the antibody of Invention LIX-LXXXVII by virtue of being the cognate antigen, necessary for the production of the antibody. Although the polypeptide and antibody are related due to the necessary steric complementarity of the two, they are distinct inventions because they are physically and functionally distinct chemical entities, and because the polypeptide can be used in another materially different process from the use for production of the antibody, such as in a pharmaceutical composition in its own right, or in assays for the identification of agonists or antagonists.

10           c.       The polynucleotides of Invention LXXXVIII-CXVI are related to the polypeptides of Invention I-XXIX, CXVII-CCXCIII by virtue of encoding same. The polynucleotide has utility for the recombinant production of the polypeptide in a host cell. Although the polynucleotide and polypeptide are related since the polynucleotide encodes the specifically claimed polypeptide, they are distinct inventions because they are physically and functionally distinct chemical entities, and the polypeptide product can be made by another and materially different process, such as by synthetic polypeptide synthesis or purification from the natural

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source. Further, the polynucleotide may be used for processes other than the production of the polypeptide, such as a nucleic acid hybridization assay.

d. The products of LIX-LXXXVII and LXXXVIII-CXVI and the methods of XXX-LVIII are independent and distinct, wherein the respective products may neither be produced by, nor used in the respective methods.

e. The polynucleotide of invention LXXXVIII-CXVI and the antibody of Invention LIX-LXXXVII are related by virtue of the polypeptide that is encoded by the polynucleotide and necessary for the production of the antibody. However, the polynucleotide itself is not necessary for antibody production and both are wholly different compounds having different compositions and functions. Therefore, these inventions are distinct.

f. The following pairwise combinations of products are independent and distinct, wherein neither member of a pair is required for the production or use of the other, and wherein each of the pair can be manufactured independently of the other: each of I-XXIX, CXVII-CCXCIII; each of LIX-LXXXVII; each of LXXXVIII-CXVI.

4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

5. Because these inventions are distinct for the reasons given above and the searches required are not coextensive, restriction for examination purposes as indicated is proper.



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6. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

7. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).


ANY INQUIRY CONCERNING THIS COMMUNICATION OR EARLIER COMMUNICATIONS FROM THE EXAMINER SHOULD BE DIRECTED TO DAVID S. ROMEO WHOSE TELEPHONE NUMBER IS (703) 305-4050. THE EXAMINER CAN NORMALLY BE REACHED ON MONDAY THROUGH FRIDAY FROM 7:30 A.M. TO 4:00 P.M.

IF ATTEMPTS TO REACH THE EXAMINER BY TELEPHONE ARE UNSUCCESSFUL, THE EXAMINER'S SUPERVISOR, GARY KUNZ, CAN BE REACHED ON (703) 308-4623.

OFFICIAL PAPERS FILED BY FAX SHOULD BE DIRECTED TO (703) 308-4242.

FAXED DRAFT OR INFORMAL COMMUNICATIONS SHOULD BE DIRECTED TO THE EXAMINER AT (703) 308-0294.

ANY INQUIRY OF A GENERAL NATURE OR RELATING TO THE STATUS OF THIS APPLICATION OR PROCEEDING SHOULD BE DIRECTED TO THE GROUP RECEPTIONIST WHOSE TELEPHONE NUMBER IS (703) 308-0196.

  
DAVID ROMEO  
PRIMARY EXAMINER  
ART UNIT 1647

NOVEMBER 17, 2001